

A Study on Inventory Management at Super Spinning Mills Ltd-‘B’ Unit Kotnur, Hindupur, Ananthapuramu

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ABSTRACT

The project entitled Inventory management includes detail studies about inventory. Every enterprise needs inventory for smooth running of its activities it serves as a link between production and distribution process. The word inventory is derived from Latin word “invent Arian”.

Inventory means “tangible property held for the sale in the ordinary course of business”, in accounting language it means stock of finished goods only in manufacture concern, it may include raw materials, work-in progress, finished goods.

Inventory management means safeguarding the company property in the form of inventories and maintaining it at the optimum level, considering the operating requirements and financial resources of the business. Inventory management emphasizes control over purchases, storage, consumption of materials and determining the optimum level for each item of investment.

How to cite this paper: Sake Kalyan Kumar | Dr. B. C. Lakshmana "A Study on Inventory Management at Super Spinning Mills Ltd-‘B’ Unit Kotnur, Hindupur, Ananthapuramu" Published in International

Journal of Trend in Scientific Research and Development (ijtsrd), ISSN:

2456-6470,

Volume-6 | Issue-6, October 2022,

pp.882-888,

URL: www.ijtsrd.com/papers/ijtsrd51994.pdf



IJTSRD51994

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INTRODUCTION

The dictionary meaning of the word ‘INVENTORY’ is stock of goods. To the finance manager, “Inventory” denotes the value of raw materials, consumables, spares, work in progress, finished goods and scrap in which the company’s funds have been invested. We can identify inventory as those goods which are procured, stored, used and for the day-to-day functioning of the organization. The classical definition of inventory is that it is an idle resource of any kind having an economic value from this, it follows thus inventory control is planning and devising procedures to maintain an optimal level of idle resource.

NEED OF THE STUDY

- It helps to minimize the cost and wastage.
- It is useful to store the inventory based on demand.

SCOPE OF THE STUDY

The study focused on inventory management of Super spinning mills is confined to B unit only.

The study is for a period of five years i.e., from 2016-17 to 2020-21.

OBJECTIVES OF THE STUDY

- To study the various inventory techniques practised in Super spinning mills Ltd B-unit.
- To study the various stock levels maintained in Super spinning mills Ltd B-unit.
- To analyse the various turnover ratios of Super spinning mills Ltd B-unit.

RESEARCH METHODOLOGY

- Annual reports, store ledgers and magazines of the company are Used for collecting the required information.
- From company web site www.super spinning mills-B.com.

TOOLS AND TECHNIQUES

Techniques:

- LSTM Model

Tools:

- ABC analysis
- EOQ analysis
- Inventory stock levels
- Inventory turnover ratios

- Bar charts
- Tables

LIMITATIONS OF THE STUDY

- The study is limited to super spinning mills-B Ltd, hindupur only

Dataset Analysis

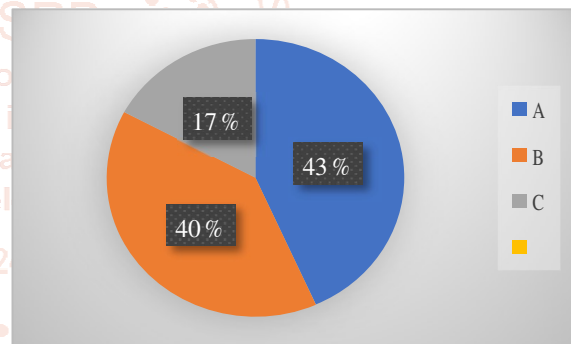
ABC ANALYSIS

TABLE NO 4.1

Item Code	Annul Consumtio (In Units)	Annual Consumption (In %)	Per Unit Cost (In Rs)	Consumptio N Value (Rs In Crs)	Consumption Value In Percentage	Class
RTW0GG005000620	3786.32	26.32	18	68153.76	6.55	C
RTW0GB005500630	2438.03	16.95	20	48760.6	4.69	C
RTW0GG012501400	2438.03	16.95	25	60950.75	5.86	C
RTW0GG014001580	1741.45	12.10	80	139316	13.39	B
RTW0GG017002000	1393.16	9.68	90	125384.54	12.05	B
RTGW00GGL06300730	1544.87	10.74	95	146762.65	14.10	B
RTD2CGGN25003020	696.58	4.84	348	242409.84	23.29	A
RTD2CGN25003460	348.29	2.42	600	208974	20.08	A

CHART NO 4.1

CATEGORY	% OF CONSUMPTION
A	43.3%
B	39.53%
C	17.10%



INTERPRETATION

Once ABC analysis has been done, the following guidelines can be established in respect of each category.

- A. Items: very tightly control, complete and accurate records, frequent review.
- B. Items: less tightly control, good records, regular review.
- C. Items: simplest control possible, minimal records, large inventories, periodic review and records.

EOQ ANALYSIS

$$EOQ = \sqrt{2 CO/I}$$

Where C= annual consumption

O= ordering cost per order

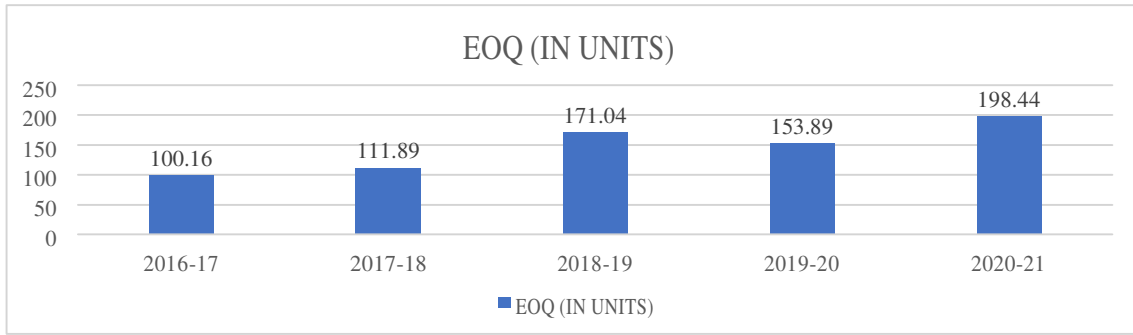
I=carrying cost per unit per annum.

TABLE NO 4.2

Year	Annual Consumption (In Units)	Ordering Cost Per Order (In Rs)	Carring Cost Per Unit Per Annum (In Rs)	Eoq (In Units)
2016-17	1393.16	36	10	100.16
2017-18	1741.45	32	9	111.89
2018-19	2438.03	48	8	171.04
2019-20	2438.03	34	7	153.89
2020-21	3786.32	26	5	198.44

GRAPHICAL REPRESENTATION

CHART NO 4.2



INTERPRETATION

The above table and graph contain EOQ over the years 2016-17 to 2020-21. The Size of EOQ increased in the year 2018-19 is 171.04 units, it has come down in 2019-20 153.89 units and increase in 2020-21 198.44 units.

STOCK CONSUMPTION AND REORDER PERIOD

TABLE NO 4.3

Year	Maximum Consumption (Units)	Minimum Consumption (Units)	Average Consumption (Unit)	Maximum Reorder period	Minimum Reorder period	Average Reorder period	Maximum Reorder Period In Emergency Purchase
2016-17	5748.2	1824.44	3786.32	28	15	21	10
2017-18	3676.06	1200	2438.04	31	20	25	12
2018-19	3575.78	1300.28	2438.03	22	16	19	11
2019-20	2522.67	960.23	1741.45	25	15	20	8
2020-21	1941.23	845.09	1393.16	32	17	24	14

FORMULE

Reorder level = Maximum consumption* maximum reorder period

Maximum stock level =Reordering level + reorder quantity (minimum Consumption* minimum reorder period)

Minimum stock level =Re-ordering level- (normal consumption Normal re-order period)

Danger Stock level =Average Rate of consumption *emergency Delivery time

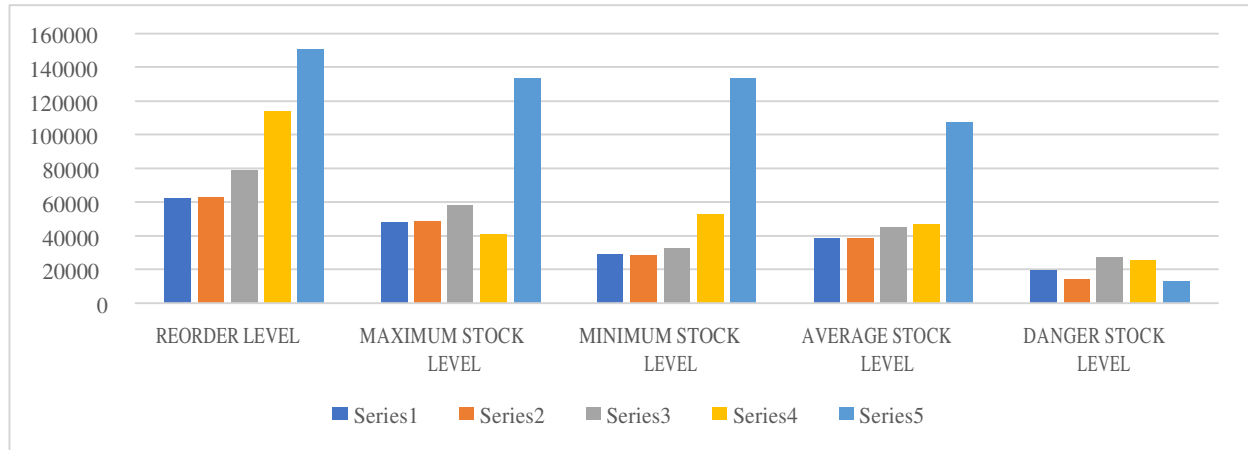
Average stock level = (Maximum stock level + minimum stock level)/2 **STOCK LEVELS**

TABLE NO 4.4

Year	Reorder Level	Maximum Stock Level	Minimum Stock Level	Average Stock Level	Danger Stock Level
2016-17	62119.36	47852.99	28683.52	38268.26	19504.24
2017-18	63066.75	48774.58	28237.75	38506.17	13931.6
2018-19	78667.16	58033.72	32344.59	45189.16	26818.33
2019-20	113957.9	40590.55	53007.11	46798.83	25256.36
2020-21	150949	133781.4	133781.4	107609.2	12931.6

GRAPHICAL REPRESENTATION

CHART NO 4.3



INTERPREATION

The Reorder level high in the year 2020-21 is 150949.6 units. Maximum stock level high in the year 2020-21 is 133781.4 units. Minimum stock level high in the year 2020-21 is 81436.88 units. Average stock level high in the year 2020-21 is 107609.2 units. Danger level high in the year 2018-19 is 26818.33 units.

SIZE OF INVENTORY

TABLE NO 4.5

S. No	Year	Opening Stock (In CRS)	Closing Stock (In CRS)	Average DTOCK (In CRS)
1	2016-17	36.24	36.3	36.27
2	2017-18	49.3	49.88	49.59
3	2018-19	62.57	61.37	61.97
4	2019-20	39.38	40.2	39.79
5	2020-21	38.56	38.24	38.4

INVENTORY TURNOVER RATIO

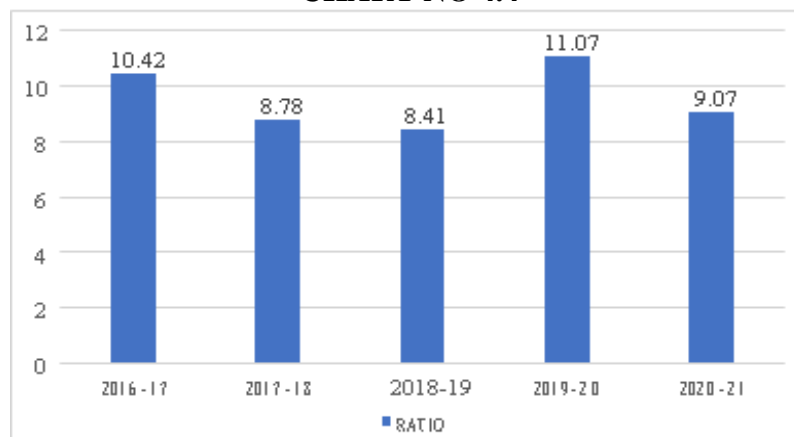
INVENTORY TURN OVER RATIO = $\frac{\text{Cost of goods}}{\text{Average inventory}}$

TABLE NO 4.6

S. No	Year	COGS (In CRS)	Average Stock (In CRS)	Turn Over Ratio (In Times)
1	2016-17	377.96	36.27	10.42
2	2017-18	435.44	49.59	8.78
3	2018-19	521.21	61.97	8.41
4	2019-20	440.5	39.79	11.07
5	2020-21	348.29	38.4	9.07

GRAPHICAL REPRESENTATION

CHART NO 4.4



INTERPRETATION

The highest turnover ratio is recorded 11.07 times in the year 2019-20. In the year 2019-20 the firm sold its products effectively.

WORK IN PROCESS TURNOVER RATIO

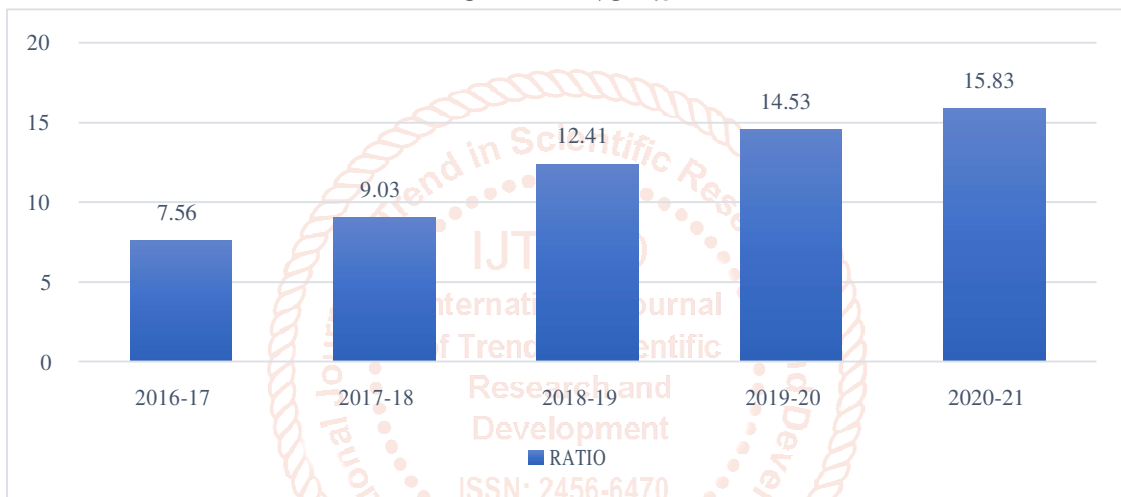
$$\text{WORK IN PROCESS TURNOVER RATIO} = \frac{\text{Cost of goods sold}}{\text{Average work in process inventory}}$$

TABLE NO 4.7

YEAR	COGS (INCRS)	AVG.	RATIO (IN TIMES)
2016-17	378	50	7.56
2017-18	435.4	48.2	9.03
2018-19	521.2	42	12.41
2019-20	440.5	30.32	14.53
2020-21	348.3	22	15.83

GRAPHICAL REPRESENTATION

CHART NO 4.5



INTERPRETATION

In the above work in process ratio is good. In 2016-17. it is low i.e.,7.56 times and in 2020-21 it is high i.e., 15.83 times.

FINISHED GOODS TURNOVER RATIO

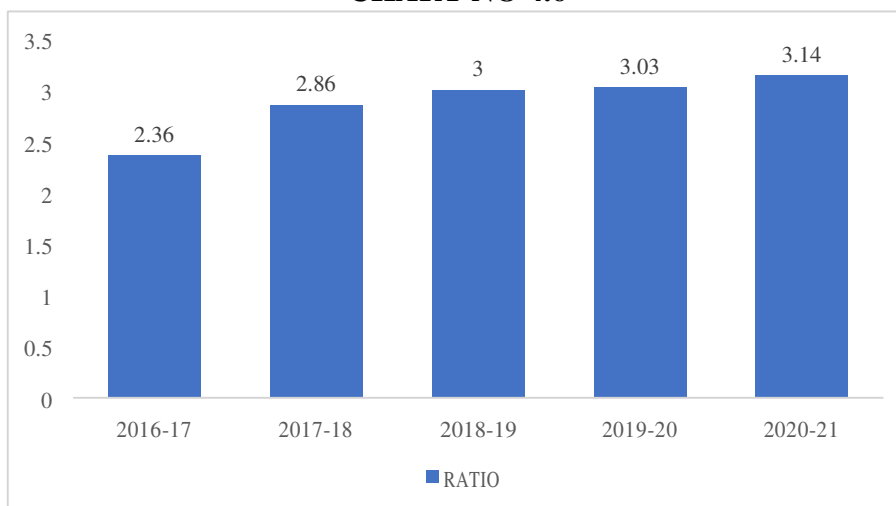
$$\text{FINISHED GOODS TURNOVER RATIO} = \frac{\text{Cost of goods sold}}{\text{Average finished goods}}$$

TABLE NO 4.8

YEAR	COGS (IN CRS)	AVG.	RATIO (IN TIMES)
2016-17	378	160	2.36
2017-18	435.4	152.4	2.86
2018-19	521.2	173.76	3.00
2019-20	440.5	145.26	3.03
2020-21	348.3	110.87	3.14

GRAPHICAL REPRESENTATION

CHART NO 4.6



INTERPRETATION

During the year 2020-21 the ratio was 3.14 times, on its highly increased before years.

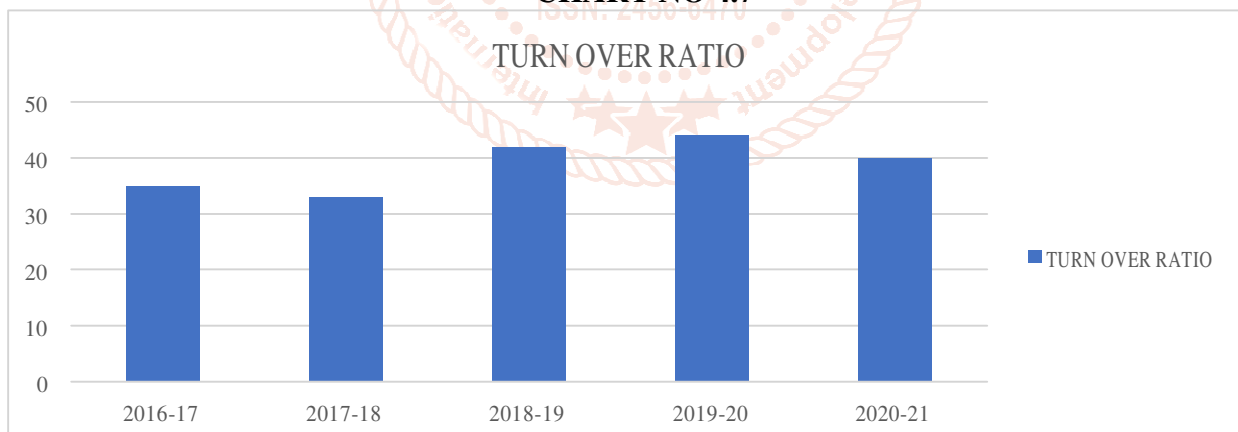
INVENTORY CONVERSION PERIOD = 365/Inventory turnover time.

TABLE NO 4.9

YEAR	RATIO IN TIMES	TURN OVER RATIO
2016-17	10.42	35.05
2017-18	8.78	41.57
2018-19	8.41	43.4
2019-20	11.07	32.97
2020-21	9.07	40.24

GRAPHICAL REPRESENTATION

CHART NO 4.7



INTERPRETATION

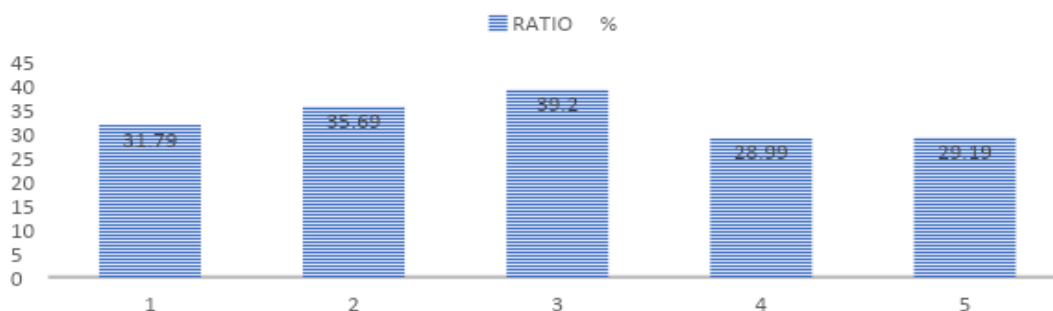
The lowest inventory conversion period was recorded at 33days in the year 2017-18. It indicates there is more demand for the products. The highest inventory conversion period was recorded at 44 days in the year 2018-19. It shows less demand for the products.

PERCENTAGE OF INVENTORY TO CURRENT ASSETS

INVENTORY TO CURRENT ASSETS RATIO= (Inventory/ current assets) *100

TABLE NO 4.10

YEAR	INVENTORY(CRS)	INVENTORY ASSETS(CRS)	RATIO %
2016-17	36.5	114.08	31.79
2017-18	49.58	138.89	35.69
2018-19	62.01	158.16	39.2
2019-20	39.79	137.25	28.99
2020-21	38.4	131.55	29.19

GRAPHICAL REPRESENTATION**CHART NO 4.8****INTERPRETATION**

The lowest inventory over current assets ratio was recorded at 28.99 % during the year of 2019-2020 and the highest inventory over current assets ratio was recorded at 39.2% in the year of 2018-19.

FINDINGS

- The Size of EOQ increased in the year 2018-19 is 171.04 units, it has come down in 2019-20 153.89 units and increase in 2020-21 198.44 units.
- The Reorder level high in the year 2020-21 is 160949.6 units. Maximum stock level high in the year 2020-21 is 133781.4 units. Minimum stock level high in the year 2020-21 is 81436.88 units. Average stock level high in the year 2020-21 is 107609.2 units. Danger level high in the year 2018-19 is 26818.33 units.
- The highest turnover ratio is recorded 11.07 times in the year 2019-20. In the year 2019-20 the firm sold its products effectively.
- The work in process turnover ratio is good. In 2016-17 it is low i.e., 7.56 times and in 2020-21 it is high i.e., 15.83 times.
- The year 2020-21 the finished goods turnover ratio was 3.14 times, on its highly increased before years.
- The lowest inventory conversion period was recorded at 33days in the year 2019-20. It indicates there is more demand for the products. The highest inventory conversion period was recorded at 44 days in the year 2018-19. It shows less demand for the products.
- The lowest inventory over current assets ratio was recorded at 28.99% during the year of 2019-20 and the highest inventory over current assets ratio was recorded at 39.2% in the year of 2018-19.

SUGGESTIONS

- The company should maintain and improve the existing performance.
- The personnel handling the stock should be trained well with a view to reduce the preventable losses.
- It is better if company adopts JIT inventory control technique, so that it can avoid excess raw material holding period.

CONCLUSION

The investment in inventories constitutes the most significant part of the current assets in most of the undertaking. Thus it is very essential to have a proper control and management of the inventories.

The inventory management should aim at procuring the material when the requirement arises through most economical way. There is still scope for its improvement.

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Websites

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